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AMERICAN GAS ENGINEERING JOURNAL

FORMERLY

AMERICAN GAS LIGHT JOURNAL

VOL. CX., No. 23
WHOLE No. 3196

NEW YORK, SATURDAY, JUNE 7, 1919

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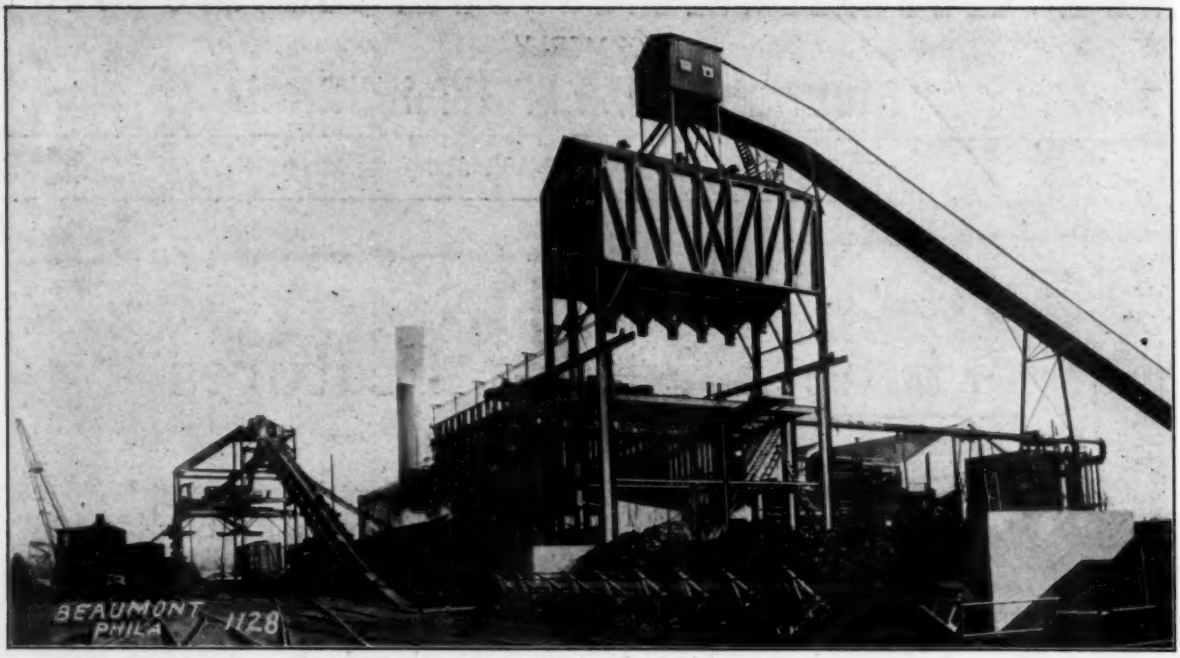
Coal and Coke Handling Equipment



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AMERICAN GAS ENGINEERING JOURNAL. June 7, 1919. Vol. CX, No. 23. Published Weekly by American Gas Light Journal, Inc., New York, N. Y. Subscription Price $3 per Year; $4 Canada; $5 Foreign.
Entered as second-class matter January 9, 1917, at the post-office at New York, N. Y., under the Act of March 3, 1879.

American
Gas Engineering Journal

FORMERLY THE AMERICAN GAS LIGHT JOURNAL

Vol. CX, No. 23 NEW YORK, JUNE 7, 1919 Whole No. 3196

Church Light a Help Towards Filling in a Valley in the Load Curve

Wherein Freedom from Glare of Gas Lighting Has a Practical Value of Considerable Importance

By J. E. BULLARD

In spite of the fact that there seems to be a more or less widespread idea that it is hard to secure gas lighting from churches, just the opposite is the case in many if not in most communities. Church lighting is not ordinarily a profitable load for the electric lighting company. Electric lighting companies are coming more and more to adopt readiness-to-serve rates which make the cost of electric lighting very much higher than the cost of gas lighting.

The average church-lighting installation uses lights only two or three times during the week, and on some of those nights may not use the whole installation. Since there are always a large number of lights installed and the readiness-to-serve rates of electric light companies base their demand charge upon the maximum demand ever made upon the lines, the demand charge for a church is sure to be high. This means that regardless of how low the current charge may be the total rate paid for the electricity will be high.

A Profitable Form of Business

The fact that electric light companies are charging high rates to churches, however, does not necessarily mean that church-lighting loads are unprofitable. The lights are used to a greater extent on Sunday nights than at any other time during the week. On these nights there is a minimum of commercial and industrial lighting being used, so that the church lighting helps to fill in the valley in the load curve caused by the dropping off of the commercial and industrial lighting loads on Sunday nights. In the case of the majority of churches there is not a great deal of lighting used during the week. The church, or some portion of it, may be open several nights a week, but the probability is that only a fraction of the number of lights that are used on Sunday nights will be used.

This means that the church-lighting load is really a profitable load for the gas company, though it may not be a profitable one for the electric lighting company. The gas company distributes gas for all purposes in one system of mains. The gas mains that are used to supply gas for heating or power purposes are also used to supply gas for lighting purposes. In this respect the system of distributing electricity differs to a very considerable extent from that of gas.

Electricity for lighting purposes is distributed at one pressure for lighting and for power purposes at another. Electricity for heating purposes may be delivered at either the pressure used for lighting or the pressure used for power. In some special cases it may even be supplied to the consumer at a third pressure. This means that the electric lighting company must as a rule go to considerably more expense to be ready to supply electricity to churches for lighting purposes than is the gas with gas companies where there is a gas main running directly in front of the church of a capacity amply sufficient to supply all the gas required for lighting purposes. No increased capacity of street supply is required in the case of gas, while in the case of the electric lighting company the installation of an expensive transformer and the running of considerable copper wire may be necessary.

Ease of Control Attainable

There are to-day a great many churches in which electricity has never been installed on account of the cost. There are others that are changing from electricity to gas on account of the lower cost of gas lighting and the more satisfactory results that can be obtained from it. In all cities where there is any determined effort on the part of the gas company to secure gas lighting there are many interesting

church installations. The only advantage that electricity has over gas lighting for church illumination is the more or less fictitious one of greater ease of control. As a matter of fact, gas lighting controls of various natures can be installed which will make gas lighting just as easily and satisfactorily controlled in churches as is the case with electricity. If the original installation is properly made and the lighting units are given a reasonable amount of maintenance attention there is no reason why gas lighting in churches should not prove more satisfactory than electric lighting.

It is not necessary to make a complete gas installation in order to get gas lighting into churches. In many churches there are already several gas outlets where all that needs to be done is to install the proper burners in order to increase their gas consumption for lighting. All churches equipped with kitchens are using gas in those kitchens if the gas salesmen have been abreast of the times. This means that merely selling a few up-to-date gas lights is all that is necessary to demonstrate to the church officials the superiority of gas lighting.

Where churches are not yet piped for gas, side lights can usually be installed at small expense and be used to supplement the present lighting system and improve the lighting conditions. Such an installation makes a good start and can be the opening wedge for a complete installation.

Some Instances

In St. Mary's Church, on Broadway, in Providence, R. I., an installation of forty-eight C-E-Z lights has been made on the pillars in the church. These have improved the lighting to such an extent that the church authorities are already beginning to consider installing several semi-indirect gas lights. It is only a matter of time when the whole church will be lighted by gas in spite of the small beginning that was made.

One of the oldest churches in the same city, the St. John's Episcopal Church on North Main Street, has also installed ten C-E-Z lights. This, of course, is not a large installation, but it does show the trend among churches toward gas lighting in spite of the idea that was popular for so long that gas lighting was not satisfactory in churches because it was not so easily controlled as some other types of lighting.

A colored church in Providence burned, and when they rebuilt gas lighting was used in a greater part of the church, as it has also been used in a neighboring colored church.

Enlisting the Pastor's Co-operation

The modern, up-to-date clergyman is exceedingly interested in the lighting system in his church, for he knows that unless that is right the very best sermons he preaches in the evenings will fail to have the best effect. He does not want any lighting system which is going to detract from his preaching. Such a system will have a detrimental effect upon the degree of success he enjoys. It will be far harder for him to build up his congregation if there is a lighting system in his church that counteracts to a greater or lesser degree the effects of his preaching.

If this point is mentioned to a clergyman the chances are that he will surprise the lighting salesman by the knowledge that he displays about the effect of lighting upon congregations. If he has not given the matter attention this line of attack will interest him. Although clergymen do not always have great influence with the managing board of the church, they usually do. In any case, it is much easier to make sales if they are first brought over to the side of gas lighting.

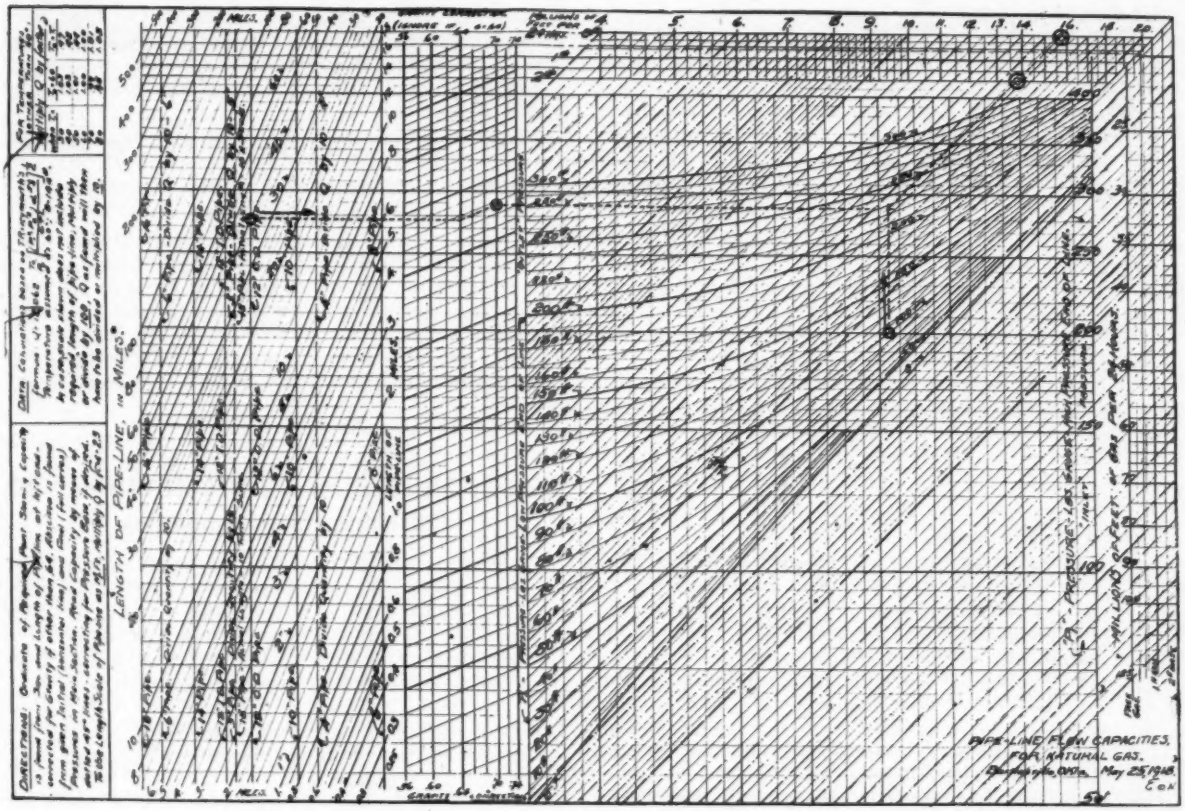
All gas lights installed in churches should be concealed from the direct gaze of anyone in the body of the church by enclosing them in opalescent glass, or, if they are suspended from arches or ceiling, by using semi-indirect units. This precaution will result in far better lighting effects and will usually overcome any objections in regard to less convenient control. What is really needed in church lighting is not a system that can be turned on and off easily, but one which gives a soft white, evenly distributed light of an intensity great enough to make reading easy for people with weak eyes in any part of the lighted area. Gas lighting does this, and there is no other system of lighting that does it as well.

Put these facts up to the church management, gain the co-operation of the clergyman and the securing of gas lighting for churches is not nearly as difficult as it might seem. It is better practice to forget all about remote controls. These are the weak points rather than the strong points of gas lighting. What is important, what is most important of all, is the quality of light. The good salesman never dwells upon the weak points of his goods. He does not allow the prospect to dwell upon them. He sells his goods on their strong points. Gas lighting has an exceedingly strong point in regard to the quality of the light it gives, in regard to the freedom from glare. It is a form of lighting that can be used in churches without any fear that it will put anyone in the congregation to sleep. It gives the clergyman a chance. It is really the best form of lighting for church use, and if its case is properly presented it is the kind that will be used more and more as time goes on.

All Regulations Relating to Gas Made by Federal Fuel Administrator Set Aside

The United States Fuel Administration has set aside all orders pertaining to oils and gas. The Federal order follows:

"The United States Fuel Administration, acting under authority of an executive order of the President of the United States dated Aug. 23, 1917, appointing said administrator, and of subsequent executive orders, and in furtherance of the purpose of said orders and of the act of Congress therein referred to and approved Aug. 10, 1917, hereby orders and directs that all rules, regulations or orders heretofore issued or promulgated by or under authority of said United States Fuel Administrator governing licensees engaged in the business of importing, manufacturing, distributing and transporting crude oil, fuel oil, gas oil, kerosene, gasoline and natural gas, or regulating the production, sale, distribution or use thereof, and all amendments and modifications of said rules and regulations and orders, be, and the same hereby are, vacated and set aside as of the 15th day of May, 1917."



Pipe-Line Flow Capacities for Natural Gas

By E. O. HICKSTEIN

The chart shown herewith is based on the following data and assumptions:

Pipe-line flow formula of T. R. Weymouth used in all calculations.
Temperature assumed as 60 deg. Fahr.
Barometer assumed as 14.4 lb. per square inch.

The chart is the second of two designed and drawn by the writer for use in natural gas engineering. The first chart, on the horsepower required to compress natural gas, appeared in the May 3 issue of the AMERICAN GAS ENGINEERING JOURNAL. These charts are published with a threefold purpose:

1. As a possible aid to other natural gas engineers and operators who may find them a convenience in the solution of some every-day problems.

2. As an abstract study in the graphic correlation of a number of independent variables.

3. As a suggestion which might lead to the application of similar means for solving a sort of artificial gas problem which the future is going to bring in greater numbers.

The chart herewith connects all the variable factors entering into the calculation of pipe-line carrying capacities of natural gas, namely: the size and length of line, pressures at both ends of the line, gravity of the gas, quantity of gas and pressure "base"—i. e., the arbitrary pressure at which the gas volumes are expressed.

As in the case of the chart already published, results are accurate to within 1 per cent, assuming an absolutely correct formula. The instructions for the use of the chart and the explanation of its construction are somewhat condensed in this article, being practically a repetition of those appearing with the first chart.

INSTRUCTIONS

The construction of the chart can be most easily understood and remembered if it is considered as essentially just a single set of curves, viz.: the straight line 45-deg. dot-and-dash lines. The arrangement at the left end merely takes the place of the scales usually found along this side of a curve. The curved lines labeled 50 lb., 100 lb. up to 300 lb. are only secondary curves. They take the place of the scales usually found at the bottom. These latter curves are superimposed on the dot-and-dash lines to permit the use of larger scales.

The intersecting vertical and diagonal lines at the left determine a horizontal line for any given length and size of pipe line. Somewhere on this line is the point giving the desired answer—quantity of gas. The set of curved lines determines a vertical line for any given pressure conditions. At the intersection of the horizontal and vertical lines is the point wanted, from which the gas quantity can be read directly from the scale along the top and right.

In the problem shown on this chart we are given the following data: Forty miles of 12-in. O. D. line;

pressure at intake to line P, 200 lb.; pressure at outlet P_2, 100 lb.; gravity of gas, 0.70.

From the length and size of the pipe line and the gravity the location of the horizontal line is determined. (If the gravity had been 0.64, a fair average value, there would have been no change in the direction of the line.) From the given pressure values the location of the vertical line is determined. This line is drawn through the intersection of the curved 100-lb. line and the horizontal line shown at 200 lb. on the P_1 scale at the right. The point of intersection of the two lines shows the gas quantity to be 15.7 million cubic feet of free gas per twenty-four hours, or 13.8 million feet of 2-lb. gas (this means 2 lb. above the assumed barometer, 14.4 lb.).

Mathematical Discussion

The formula connecting all the variable may be written

$$Q = k\left[\frac{(P_1^2 - P_2^2)d^{5\,1/3}}{G\,L}\right]^{1/2}$$

where Q is the gas quantity,
P_1 is the pressure at entrance to line;
P_2 is the pressure at outlet from line,
d is the diameter of pipe line (inside),
G is the gravity of the gas,
L is the length of the pipe line,
k is a numerical constant depending on the units used.

The chart shown here could have been drawn on ordinary cross-section paper. In this case the constant gas-quantity lines (the 45 deg. dot-and-dash) would appear as curved lines because of the form of the above equation. On "log" paper the lines are straight. Because of the number of points which would have to be calculated before drawing the curves, the use of the log paper involves a considerable saving of time.

The arrangement at the left is so drawn that the distance of any point from the upper border line is proportional to the log of $\left(\frac{d^{5\,1/3}}{G\,L}\right)^{1/2}$; similarly, the distance to the right of any point in one of the curved lines is proportional to the log of $(P_1^2 - P_2^2)^{1/2}$. From this it follows directly that the constant gas-quantity line will be a 45-deg. diagonal. The most difficult part in constructing the chart is the selection of the most suitable scales.

Other Problems

It should be noted that this chart can be used for any size of pipe line from 4 to 18 in. in diameter. As stated on the chart, when it is used for 4, 5 or 6 in. line the correct gas quantity is one-tenth the scale reading. Also, for an 18-in. pipe line the actual length of the pipe line should be divided by 10 before chart is used; the scale reading will then be direct. For 8 to 16 in., inclusive, the chart is direct reading.

The flexibility of the "length" scale may be pointed out to advantage. The scale for the 10-in. line, for example, runs from 0.7 mile to 70 miles. If information is required for a line longer or shorter than included in this scale, the actual length should be divided or multiplied by 100; the gas quantity read on the scale should be divided or multiplied (same process as the first) by 10 to give the correct answer. For illustration, if the 12-in. line in our example had been 4,000 miles long (an impossible example, of course), the correct gas-quantity answer would be 1.57 million of feet of free gas.

The writer has also found the following relation useful: If it is desired to use the length scale as thousands of feet (instead of miles) the gas-quantity reading should be multiplied by 2.3 $(= \sqrt{5.280})$.

The chart can be used to find not only an unknown gas quantity, but also any one of the variables, all others being known. The scales at various pressure bases are convenient when comparison is made against a meter. Measurements in the natural gas industry are invariably expressed at a pressure higher than atmospheric, 8 oz. and 2 lb. being the most usual.

State of Missouri Passes "Theft of Gas" Bill Protecting Gas Companies

Senate Bill No. 680 relating to "theft of gas," recently passed by the Missouri State Legislature, providing a penalty for theft of gas and that the presence of any device which shall prevent any gas meter from properly measuring or registering gas shall be prima facie evidence of intention to defraud, follows:

AN ACT relating to offenses against public and private property and repealing Sections 4576 and 4577, Article 5, Chapter 1909.

Be it enacted by the General Assembly of the State of Missouri as follows:

Section 1. That any person who shall make a connection of any pipe, tube or device to any gas meter by any gas company furnishing gas for public or private use, or shall efface, puncture, move, remove, reverse or alter any gas meter or the connections thereof, owned or used by such gas company; or shall prevent any such gas meter from properly measuring or registering gas; or shall knowingly take, receive, use or convert to his own use or the use of another any gas which has not been measured; or shall cause, procure, permit, aid or abet any person to do any of the aforesaid acts, shall, upon conviction, be punished by imprisonment in the penitentiary for a term not exceeding two years or by a fine not exceeding $500, or by both such fine and imprisonment. The existence of any of the aforesaid pipe connections or meter alterations or the use of unmeasured gas shall be prima facie evidence of intent to violate and of the violation of this act by the person or persons using or receiving the direct benefits from the use of the gas passing through such connections or meter or being used unmeasured as aforesaid.

Section 2. That Section 4576, relating to defrauding gas companies, and Section 4577, relating to altering gas meters for fraudulent purposes, of Article 5, Chapter 36, of the Revised Statutes of Missouri, 1909, said chapter being entitled, "Offenses against public and private property," and all other acts and parts of acts in conflict herewith, are hereby repealed.

This law, when enforced, will mean the saving of many thousands of dollars annually to the gas companies of Missouri.

Gas Company President Tries His Hand at Selling

Doesn't Net Much in the Way of Increased Consumption, but Sets an Example, Worthy of Following, of Selling for Publicity Value

By LOUIS RESNICK

General Manager, Associated Trade Press

I'm of the belief that the man in the street, and perhaps also the man in the gas office, pictures "The president of the gas company" as a man who comes to his office at, say, 11 o'clock in the morning, glances through a board of directors' report, confers for five minutes with his department heads and then is off for the country club to dine, drink and play golf the rest of the day. As for such a thing as WORK, "The president of the gas company" would none of it—in the mind of the man in the street. I wonder, then, what the man in the street—in St. Louis, at least, would say if he discovered—as I recently did—that the president of his gas company works, not an hour a day, but all day, every day and even while at lunch. I wonder what the man in the street would say if, after taking an important business prospect to the Bevo Mill for one of those famous "roasted-while-you-look-on" chicken dinners, he learned that the president of the gas company was largely responsible for the delicious taste of that roasted chicken, for the uniform brown finish on the tender little fowl that was placed before him and his important business prospect, even for the cleanliness and crispness of the toast that was served with the chicken.

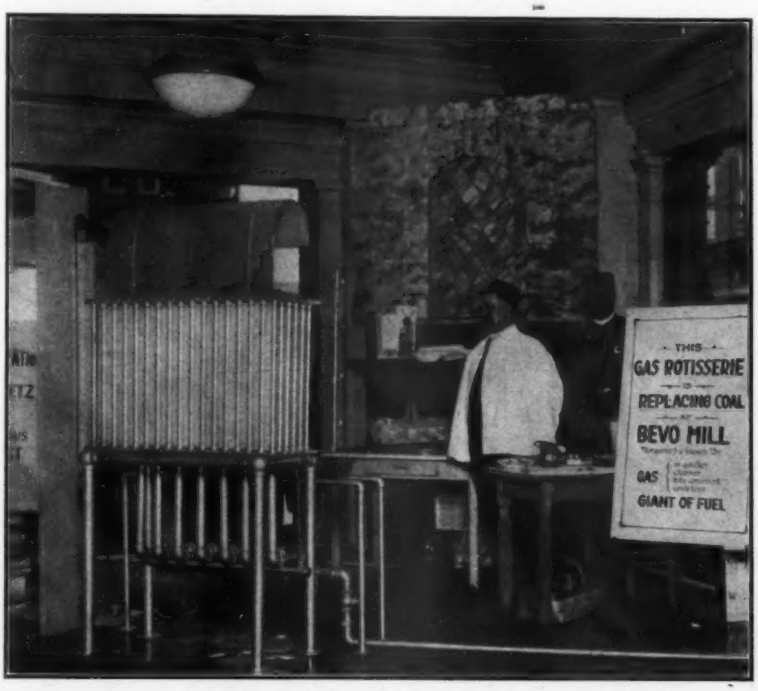
City's Most Famous Eating Place

I have said that the president of the gas company was responsible for these things, but I must correct myself; for in St. Louis it is "Mr Holman of the gas company," not "the president of the gas company." In fact, this particular story is about "Mr. Holman, the gas salesman," rather than C. L. Holman, president of the Laclede Gas Light Company of St. Louis, a forty-million-dollar corporation.

Thanks to Mr. Holman's sales eye, St. Louis' most famous eating place now serves gas-roasted instead of coal-roasted chicken, gas-toasted instead of coal-toasted bread, and soon will be using gas-made instead of coal-made steam. Thanks to Mr. Holman, St. Louis now has a gas-fired rotisserie that probably is the only one of its kind in the country. For even when standing directly before the rotisserie one would hardly realize that it is a gas and not a coke fire he is looking upon.

How It Happened

It all came about in this way. Mr. Holman, at lunch in the Bevo Mill one day, noticed an even dozen spring chickens revolving before a coal-fired rotisserie. As he watched, an attendant took a poker and began to rid the lower part of the grate of ashes that had accumulated and in so doing accidentally, but unavoidably seasoned the dozen spring chickens with a fine coal ash. Next the attendant put a fresh supply of coal into the grate and again the chickens were seasoned in a manner not prescribed by the chef, with fine coal dust. Not long after that a contrary gust of wind drove the smoke from the coal fire back into the Mill. The interior of the $200,000 place of beauty received another fine coat of soot, the diners coughed and the chef cussed the luck.



HENRY DIETZ, MANAGER OF THE BEVO MILL, AND ST. LOUIS' MOST FAMOUS CHEF, ROASTING TWELVE MILK-FED SPRING CHICKENS IN THIRTY MINUTES IN THE LACLEDE GAS COMPANY WINDOWS

Salesman Instinct Would Not Let Him Sit Still

Mr. Holman was too good a gas salesman to let the psychological opportunity slip by. He did not even wait to get back to the office and tell the commercial department of the incident. Instead he called his good friend Henry Dietz, formerly chef and manager of the world-famous Tony Faust Cafe, now manager of the Bevo Mill, and asked why that

modern gentleman persisted in the use of solid fuel.

It is not necessary to go into the details of Mr. Holman's selling arguments. Suffice it to say that the next day there was a conference of Mr. Holman, Mr. Dietz, and J. J. Burns, superintendent of the commercial department of the Laclede Company at which the problems to be solved preliminary to converting the Bevo Mill Rotisserie from coal to gas were discussed in detail. And there were real problems.

Had to Placate a Desire $200,000 Had Been Spent to Gratify

In the first place, Mr. Dietz explained that August A. Busch, he of Budweiser and Bevo fame, had spent $200,000 in duplicating at St. Louis a dining place such as those found only in the land of the Zuider Zee and that he would not detract from the picturesque appearance of the mill by replacing the glowing coal fire with artificial gas flames. There were other objections voiced by Mr. Dietz, but this was the most important. The problem resolved itself into one of producing with gas a coal-fire effect that would not be apparent even to the closest observer.

True, many a coal-fired rotisserie had been converted to gas before, but so far as the St. Louis interests could learn, in nearly all these cases the lining of the fireplace has been of asbestos and the coal grate removed. As Mr. Dietz insisted on retaining the coal-fire effect, it was impossible to follow this procedure in the conversion of the Bevo Mill Rotisserie.

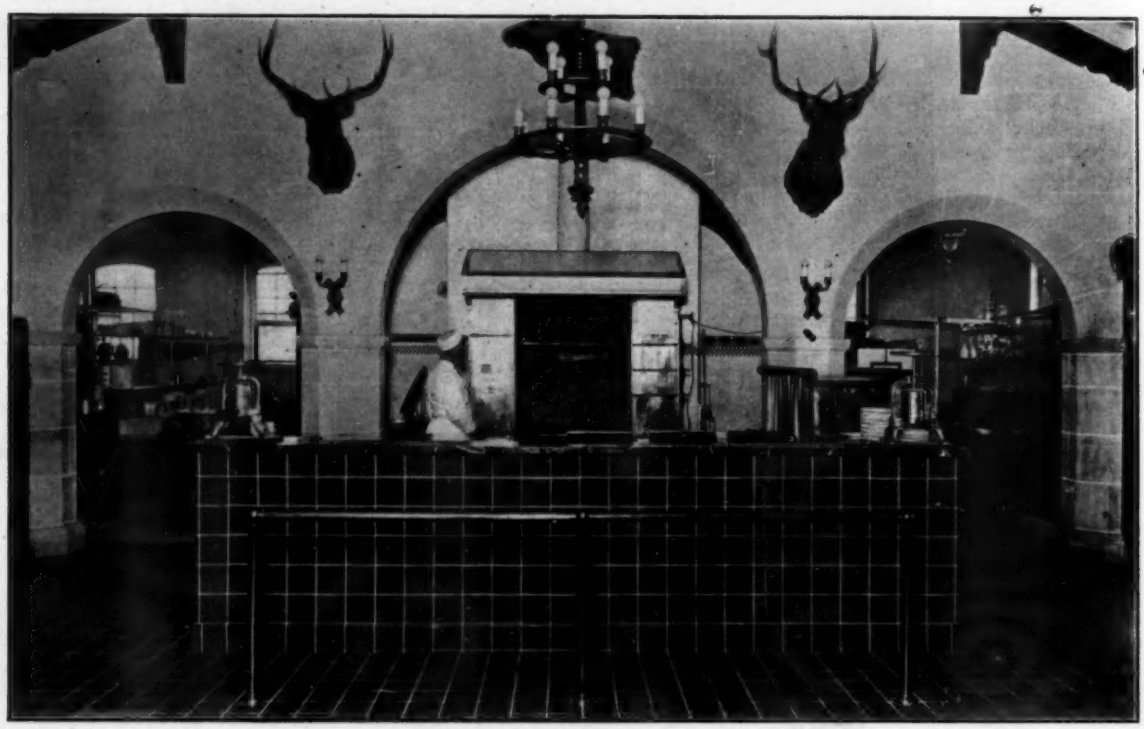
Getting Back to the Gas Company's Laboratory

An experimental gas-fired rotisserie was set up in the laboratory of the gas company and for seven weeks tests were made. The appliance was tested for utility, for appearance, for economy, for speed, for gas consumption and for efficiency in the roasting of chickens. After more than forty hours of actual operation in these tests, through the combined suggestions of Mr. Holman, Mr. Burns, Mr. Dietz and George Evans, general manager and chief engineer of the Laclede Company, a perfect coal-fire effect was obtained through the use of "clay doughnuts" and certain adjustments of the seven blast burners by which the rotisserie is fired. Even the blue flame usually toping a coke fire was simulated at the request of Mr. Dietz as he had not long before changed the rotisserie fuel from coal to coke.

Getting the Cafe Manager Into the Gas Company Show Window

The final laboratory test was made about ten weeks ago. The Bevo Mill manager, lukewarm at the beginning of the tests was by this time so enthusiastic that he consented to demonstrate the operation of the rotisserie in the windows of the gas company. The day of this demonstration will long be remembered by certain gas consumers and messenger boys. For after roasting twelve milk-fed chickens in the Laclede show window Mr. Dietz served hot chicken sandwiches with his compliments to those who had watched the demonstration.

On the following day the Bevo Mill rotisserie was converted from coke to gas. To make the conversion it was necessary merely to install seven blast or bunsen burners, to fill the coal grate with incandescent fuel or clay doughnuts closely packed and to adjust the air regulators on certain of the burners in such a way that



THE BEVO MILL ROTISSERIE BEFORE THE CONVERSION FROM COAL TO GAS

a small blue flame appeared just above the pile of "artificial coal."

Attendant Pokes the Fire

"Would you believe," Mr. Dietz asked the writer, "that after the gas-fired rotisserie had been in operation at the mill for two weeks, I caught the attendant poking the fire for ashes? I had to throw the power away to keep him from jabbing the clay-doughnuts. As for my customers, I'll bet they don't realize yet that this is not a coal nor coke fire."

It is no exaggeration to say that after using the gas rotisserie for two months, Mr. Dietz is the most ardent advocate of gas as a substitute for solid fuel in St. Louis, not barring Mr. Holman or Mr. Burns. The fact is that the Bevo Mill, with its numerous other unsurpassed attractions is now featuring "Rotisserie Chicken Dinner $1.75" above everything else.

"Let me tell you something about this gas rotisserie," Mr. Dietz says. "From the point of view of cleanliness, as a labor saver and for speed and uniformity in roasting chickens, it cannot be compared with anything I have seen here or in Europe in twenty-five years of experience as a chef. Now, we have no ashes or coal dust to ruin our chickens, no face flames to burn them in spots, no delays in firing up.

Don't Have to Get Ready 3 Hours Ahead Nowadays

"We roast 150 to 200 chickens a day. They are all milk-fed chickens, the most valuable on the market. We buy more than $1,000 worth of chickens a week. Since the installation of this gas appliance we have not spoiled a single chicken on the rotisserie. They brown much more quickly and far more uniformly than was the case with coal or coke.

"When we burned coke we had to start the rotisserie fire at 4 o'clock in the afternoon to have roast chicken for the 7 o'clock dinner. With gas we can get started on the roasting operation in less than 15 minutes. Last Friday we served a party of 500 delegates from the Yale Club's convention, roasting 150 chickens while the guests were seated. This would have been impossible with coal or coke."

Where the Question of Table Linen Enters

Mr. Dietz's praise for the gas rotisserie is endless. He pointed to the saving in linen and in decorator's bills resulting from the elmination of ashes, coal dust and smoke. He pointed out the advantage of roasting chickens by radiation, which is made possible with the gas rotisserie, as compared to roasting by coal flames. He has even had a special gas singer made with which to singe the chickens before roasting. The installation of the gas rotisserie was followed immediately by the substitution of gas toasters for the coal toasters at the Bevo Mill. Now plans are under way for the installation of a gas-fired boiler to supplant the coal boiler that supplies the steam for the Bevo Mill kitchen.

While the matter of comparative fuel cost has been among the minor considerations in the installation of the gas rotisserie, two months' operations has demonstrated that, without taking into consideration the saving in labor, in cost of replacing burnt chickens and in cost of frequent redecoration made possible by the gas appliance, there is a very decided saving in fuel.

THE BEVO MILL ROTISSERIE AFTER THE CONVERSION TO GAS. NOTE THE COAL-FIRE EFFECT; ALSO THE GAS-FIRED BREAD TOASTERS

CROWD WATCHING DEMONSTRATION OF GAS-FIRED ROTISSERIE IN WINDOWS OF LACLEDE GAS LIGHT COMPANY

And Lo! a Saving in the Fuel Cost

The maximum gas consumption of the rotisserie is 50 ft per hour per burner. All seven burners are used only for the few minutes necessary to "fire up" the appliance at the start of the day. After that two burners only "half on" are sufficient to operate the rotisserie at maximum capacity; that is, to roast twenty chickens at one time. The two burners, half on, consume an aggregate of 50 ft. of gas per hour. The Bevo Mill is getting gas at an average rate of about 50 cents net per 1,000 cu. ft., which brings the cost of fuel to little more than 2½ cents per hour.

With coal or coke at the lowest prices that have prevailed at any time within the last five years, gas would be the more economical fuel. Using solid fuel, there was the loss sustained in the original "firing up" process and an additional loss throughout the day because of the inability to control the fuel consumption in proportion to the need for more or less heat.

But Where Does the Gas Company Profit?

What the gas company will gain from the conversion of this appliance, while perhaps not apparent at first thought, is very certain and important. Obviously, adding a 50-ft.-an-hour consumer to a gas line is nothing to brag about. But to develop so enthusiastic an advocate of gas as the all-round restaurant fuel as Mr. Dietz has become is no mean accomplishment. Similarly, to have a unique gas installation in so popular and high class an institution as the Bevo Mill is to have an advertisement costless yet invaluable.

The Bevo Mill has a seating capacity of 1,200 and serves several times that many persons each day. Its appeal is not on the basis of price, but on quality of food and beauty of surroundings. The manager of the Mill is the best known and considered the most talented chef in the Mississippi Valley.

It is a common saying at St. Louis that "if you cannot sell a prospect a big order of merchandise or a $10,000 insurance policy any other way, take him out to the Bevo Mill for one of those rotisserie dinners and the deal is closed."

Mr. Dietz boasts of the fact that his customers have not yet realized the rotisserie is gas-fired, but it is clear that Mr. Dietz himself is so full of his secret he would welcome its discovery by every patron of the Bevo Mill. The rotisserie is operated in full view of about five hundred diners. Such an interest has been developed in the appliance that it is a common occurrence when large parties come to the Mill for the members to gather round the rotisserie and watch the chickens roast. Many persons come to the Mill because of this opportunity, and invariably the discussion runs from chickens to the appliance itself.

THE BEVO MILL—ST. LOUIS' $200,000 EATING PLACE—WHICH, AFTER TRYING COAL AND COKE, CONVERTED ITS ROTISSERIE TO GAS FUEL

American Gas Engineering Journal

SIXTIETH YEAR

Published Weekly by AMERICAN GAS LIGHT JOURNAL, INC., 150 Nassau Street, New York, N. Y.

ELBERT P. CALLENDER, Pres. S. G. KRAKE, Vice-Pres. FREDERICK A. SOUTHWORTH, Sec'y-Treas

EUGENE C. MILES, Editor

Subscription $3.00 per year, including postage in the United States, Mexico, Cuba, Porto Rico, Hawaii or the Philippines

In Canada, $4.00 Foreign, $5.00 Single Copies, 10 Cents

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As the Journal Views It

A Real Friend of the People

A political candidate, previous to an election, acknowledging the possibility of his party going down to defeat is a rarity worthy of comment in itself. But this journal is not in the habit of making note of generalities.

We were struck with the address of the Mayor of Galveston at the annual convention of the Southern Electrical and Gas Association for a different reason. We believe he hit a new chord in explaining why he and his associates, the elected representatives of the people, permitted an increase in electric rates and street-car fares notwithstanding the fact that their franchise limited and fixed the amount.

Mayor Kempner's justification is a model of conciseness. He explains: "It was shown to us that the raise practically went to pay the increased cost of labor, and that labor, in turn, was entitled to it by reason of the increased cost of living."

Not much desertion of the people there; no attempt, even before a gathering of utility men, to, after the act, pretend a hypocritical sympathy for the utilities. The action as explained stands forth as an official action to lift an unjustifiable and heavy burden from the shoulders of a part of the community and to divide it up in such small parts that those who share it do not even feel the load.

We are not interested in Galveston politics, but it

would be a disappointment to see Mayor Kempner go down in defeat because of this action. It would indicate too low a degree of intelligence on the part of the portion of the people of the United States.

And, after all, doesn't his argument hit at the very bottom of the whole rate matter? Of course, materials and equipment cost have soared. But say labor hadn't climbed in the least degree. Who is to say that the utilities couldn't have at least hobbled along even at old rates?

So we get down to it. When we hold rates down unjustly are we not taking bread out of the mouths of people who acutely need it? After all, how hard are we hitting the utilities magnate, if such person does exist, as compared to how we are hitting one who sweats hard for every dollar he makes and who is amply entitled to our every consideration?

Relaxation

A year ago things were happening every day. New methods to meet unparalleled conditions were being devised in such numbers as to become almost commonplace. Conducting a journalistic service nowadays seems flat by comparison. Where there was then a surfeit of new things to report we find that to-day we can quite thoroughly cover the field in the pages we allot to such purpose.

The truth of the matter is, people in the gas field, like in most industrial activities where the war compelled a forced pace, have pretty generally gone stale.

One can eat up energy at a terrific rate for a limited period and accomplish prodigious results. In the final average, however, he will find that the difference has been cut down in the inevitable slowing up that follows. After the spurt must come the walk.

It would be sane business policy for the gas industry to give special thought to the vacation period that is ahead, to be especially liberal in the employee's period of relaxation and recuperation.

Don't give him time merely to partially pick up. Give him time to completely come back.

Maybe the reward will be a return to our old-time form. Nowadays we're merely jogging along.

Selling for the Publicity Value

A considerable number of practical-minded men will be disappointed as to what to them will seem the "sad ending" of a story told elsewhere in this issue.

Here we have a sale made by no less personage than the president of a very considerable gas company, a man prominent in the gas field and in the affairs and public life of the city in which he operates.

To make the sale possible required original experiment and design, involving the time of the chief engineer of the company and the commercial manager; also, doubtless, considerable labor. And the total amount of gas consumed is relatively insignificant.

"Is the game worth the candle?" would be a natural query upon the lips of the aforementioned practical men.

Somehow or other, despite frequent disappointments, we take the executive to be a different sort of a being from his subordinates.

At salesmanship, for instance, we look to him to be a sort of supersalesman; a salesman of exceptional acumen and breadth of vision.

If he cannot live up to our expectations in this regard, then it would be better that he religiously avoid trying his hand at minor roles. There is a loss of prestige involved that is rather expensive in its effect upon the morale of the subordinate organization.

In this case the executive did not fall short of our expectations.

He set an example for his salesman which, we feel, will repay the company many times over for the expense of the time he personally used up in making this small-consumption sale; also that of the company's chief engineer, the commercial manager and the working force.

There are few salesmen, we fear, in the gas field who would have had what would seem to them the audacity to report in so small a consumption gained at the cost of so considerable effort for any reason whatsoever.

There are too few managers, we also fear, who would have the vision not to justify such a reluctance on the salesman's part.

The fear arises because of the too common attitude of viewing the salesman's obligations to the company as solely involved in direct increases in consumption. Alert managers of broad vision have begun to realize the salesman's potentialities in other directions.

They would have him devote directly unproductive time, if necessary, to insuring that the purchaser will be satisfied and will use the appliances he purchases. They would not feel that he was going out of his proper sphere were he to stop long enough to explain away a meter-reading disgruntlement that he might encounter in his canvass.

The president of the Laclede Gas Company in making his sale has revealed to his salesmen, through the effort and expense he went to in effecting it, that a high estimate indeed is based on the *publicity value* of a sale.

And in this particular sale the publicity value apparently was exceptionally high.

Any gas company that might discover a salesman who could bring in two such sales a year like the one described, even though the direct return be picayune,

wouldn't be prodigal, in our opinion, if it doubled his salary forthwith.

Pity the Poor Consumer

Out in Chicago, if press reports are to be credited, the gas consumer bids fair to pay a pretty bill; a bill imposed principally by his own lustiest howling companions.

The gas company complains that the rates it is working under are ruinously low. Without examining the data, we are inclined to credit the statement. The Chicago company is by no means alone in this respect.

Along came the people's champions in confusing array—aldermen, special counsel, experts, etc.—in such numbers and variety that our heads spin trying to remember and place them.

These gentry, of course, opine that the rates are extravagantly high.

Facts and contemporary conditions mean nothing to them.

And with each whack at the gas company each inventive genius discovers some new means of diverting a good part of the funds that come into the company's offices, which consequently are charged by the public against the company, into the city's treasury.

What a pretty device!

What revels of graft would be afforded the politicians while the public slumbered!

Dear old Mr. Plain Citizen, what credence would he give to charges of municipal extravagance when his taxes do not reflect it.

Mr. Plain Citizen would be blissfully unconscious of that stream of gold flowing out of his pocket through the subterranean channel of the gas company offices and thence into the city treasury.

What a pity there was no one bright enough in the old days, when politicians were strong in the directorates of utilities, to devise some such ingenious subterfuges as these. How much longer, with such headwork, could the dirty days in American business have endured!

Truly, it would seem that Chicago never will change; that it will ever be misrepresented; that the second largest urban population of this great country will go on forever permitting the few to make it seem, in the matter of civic progress, the most backward city in the land.

This whole mess at Chicago, if press reports and the reports of our correspondent reflect it truly, is the most sordid case of grab that has come to our attention in months.

But pity not the gas company.

If it is working at ruinous rates, inevitably the rates must go up.

Chicago cannot be without gas.

Pity the poor consumer.

He must pay the necessarily increased rates and, in addition, if the politicians have their way, the increase unnecessarily required to keep that subterranean channel flowing.

Home-Owning Employees Without Outlay

The bulwark of this nation against Bolshevism lies in the fact that a majority of our people, instead of merely the minority, have something to lose, and they set high store by that something.

A great many industries have discovered that tying the employee to the locality minimizes uncalled-for labor disturbances. They effect this by making it is possible for him to own his home.

Truly, as has been said, a home-owning citizen is, in the general run, a good citizen. Gas companies, it would seem, are especially well placed to encourage home-ownership among employees. And it would seem that they especially could profit thereby.

In our humble view it is not lack of funds that restrains the average worker from home-ownership; it is a lack of confidence in the permanence of his job.

This does not mean permanence alone from the viewpoint of the employer merely, but permanence from the viewpoint of the employed.

The employer, it may be, would like to have him all his life. But the employed may not fee confidence enough in the just dealings of the employer to feel that he will want to tie up with him indefinitely.

Let the employee feel assured that his job is certain, and always will be worth holding, and you have already taken a considerable step toward encouraging him to home-ownership.

Up to 225,000 cu. ft. Daily Stop-End Benches Can Be Operated with as Little or Less Expense Than Any Other Type

L. G. Crenshaw Relates Conditions to Types of Equipment—When It Is Economical to Change and to What Type

Unless your send-out is as much as two hundred and twenty-five thousand cubic feet of gas daily the stop-end benches can be operated with as little or less expense than any other type, declared L. G. Crenshaw, of the Parker Russell Mining & Manufacturing Company of St. Louis, warning against abandoning this type in favor of any others without thoroughly investigating conditions, in a paper before the Southern Gas Association

The first type of plant to be considered, after your send-out has outgrown the plant of stop-end retorts, is the plant of horizontal through retorts built in benches of sixes. This bench is constructed with either three-quarter or full depth furnaces and recuperators, and with retorts and settings of silica or fire clay. The retorts are eleven foot five inches over all and are fitted at each end with self-sealing mouthpieces. The gas coal is charged into the retorts with a hand scoop, and the coke pushed through by a pusher into coke quenching chutes. The coke pusher is usually operated by hand, but may be fitted with a motor if desired. The

main advantage to be gained by the use of this type plant is the saving in retort house labor, both in cost per thouasnd cubic feet of gas made and eliminating hot unpleasant work of drawing retorts.

The Bench of Sixes

A bench of sixes with 11 ft. 5 in. through retorts will produce 75,000 cu. ft. of gas daily, when a gas coal yielding 5 cu. ft. to the pound is used. The increased make of gas per man compared with the stop-end bench of sixes is approximately 25 per cent. Several other distinct advantages are known for this design bench, one being that the three-quarter depth bench of closed-end retorts can be readily changed over to this small through bench as the over-all dimensions of the arches are the same. If the stop-end arches are in good condition it is rather simple construction to remove the rear walls, and install new mouthpieces for the discharging end. It would not be wise, however, to make this change unless your arches are comparatively new with a number of years' service left in the brickwork, bindings and mountings. Another advantage of this bench is its adaptability to power machinery for charging, when your send-out grows enough to warrant its installation. These benches, however, should not be built with the intention of using power machinery for charging, as a greater advantage in reduced labor cost can be gained by the use of benches of eights with retorts ranging in length from 16 ft. up to and including 22 ft. A minimum send out of 225,000 cu. ft. of gas is necessary for a plant of 11 ft. 5 in. retorts for economical operation.

The next type of plant to be considered is the plant of inclined benches. A number of these installations have been constructed throughout the country, and in most instances have proven entirely satisfactory. The send-out of gas, to allow economical operation, should not be less than 300,000 cu. ft. of gas daily. These plants are usually constructed of benches of six retorts with a rated capacity of 100,000 cu. ft. of gas each bench per twenty-four hours, based on a 5 ft. yield. The minimum amount of labor required for operating is four men on the day shift and three men at night. Many advantages are found in this type of plant; one of which to be considered is the reducing of laborious work to the minimum. The gas, tar and ammonia yields should stand up well and will do so with the proper handling of carbonized heats. Some difficulty has been experienced in the past in the quality of gas and tar produced. This difficulty has been overcome by improvements in the designs of the unit and intelligent operation. The lorry for charging retorts has been greatly improved during the last few years, which enables each retort to receive a uniform charge as to weight and a charge that is evenly distributed from end to end.

What a Typical Incline Retort Plant Would Consist of

A typical incline retort plant would consist of, in addition to the benches ,a track hopper for receiving the coal from the railroad cars, a coal crusher, a coal elevator, a storage hopper above the benches, a lorry for charging retorts and coke quenching chutes with coke car and tracks for removing the coke to storage. Buildings or shelter for the benches are needed, as well as the charging and discharging floors. In addition to the equipment listed, a small manual pusher could be readily used to start the charges from the retorts.

The third plant I shall describe is a machine operated plant of small gas ovens. This plant is designed to succeed the plane equipped with one-half or three-quarter depth bench of closed-end sixes. It can be operated economically for send-outs as low as 300,000 cu. ft. of gas daily; as it requires only seven men distributed over two shifts. The units are constructed with three carbonizing chambers, each chamber taking a charge of 1¼ tons of coal. The period of burning the charges is twelve hours, the coal coking completely within this time. Basing the yield of gas at 5 cu. ft. per pound of coal carbonized, each unit will produce 75,000 cu. ft. in twenty-four hours. A decided advantage is found in the grade of coke obtained from an oven of this type. The duration of the burn plus the weight of the charge produces a high quality coke of firm structure. The tar yield is higher than the yield from retort benches and the tar is of better quality.

Several installations of gas ovens have been built in this country in the last few years, and in most every instance have proven their worth in competition with benches of retorts. While most of the installations have been of greater capacity per unit than the installation I am describing the principles of designs are the same. I call this to your attention as I wish to outline a few of the salient features developed in an installation of gas ovens erected in one of the northern states.

This installation consists of five units of ovens fifteen carbonizing chambers in all, each chamber rated to receive a charge of four tons. In several of the pioneer installations of gas oven trouble had developed in the heating of the ovens, causing lampblack and pitch. The method used in taking off the gas from the carbonizing chamber was such that it was necessary for the gas to pass through extremely high heats before reaching the hydraulic mains. The northern installation I mention was designed to eliminate this trouble, and has proven to have done so in the eight months it has been in operation. The combustion flues for heating the chambers are arranged so they do not pass over the top as has been customary in the construction of benches. This design keeps the top twelve inches of the chambers several hundred degrees cooler than the coke column, and allows the gases to pass off without breaking up. Four outlets from each chamber are provided to take off the gas, each outlet leading into an insulated collecting flue, which in turn leads to the hydraulic main. With this type of construction the ovens are producing a tar yield of approximately fourteen gallons to the ton of coal carbonized. The tar is of excellent quality, being of a light brown color and is moderately thin.

Another feature which I believe will be of interest is the type of oven doors which are used. Although these doors are approximately 6 ft. high and 12 in. wide on the charging end and approximately 8 ft. high and 15 in. wide on the discharging end they have proven to be self sealing. They are rather unique in construction, being somewhat flexible instead of rigid, are insulated with Kieselguhr, and are fitted with baffle plates. They are placed in such a position as to keep them as far away as possible from the heat of the coke ovens. The self sealing device is an arrangement of eccentrics built on the door frames.

Machine Operated from Coal Pile to Coke Pile

A gas oven plant is a machine operated plant from the coal pile to the coke pile. The machine operation starts

at the track hopper where the coal is unloaded from the railroad cars. An apron conveyor is usually used from the track hopper to the coal crusher, and a bucket elevator from the crusher to the overhead coal storage bins. The coal is fed by gravity from the storage bins into the charging lorry and weighed. From this lorry the charge is dropped into the ovens where it is leveled off by a power driven leveling ram. After the charge is thoroughly burned the coke is pushed from the ovens with a power pusher through a coke guide into a quenching car. The coke pushing machine is a combination pushing and leveling machine, and is provided with apparatus for lifting and removing the oven doors. The coke guide is placed on the discharging end of the ovens and is used to guide the hot coke from the ovens into the quenching car. It is a combination guide and oven door lifter and is power driven. The coke car receives the hot coke, removes it from in front of the ovens to the quenching sprays, then dumps it into a pit where it thoroughly cools. From this point the coke may be handled as desired, either to storage in the yard by a locomotive crane or to a screening plant where it may be made ready for sale.

The seven men for labor will handle all the operation as mentioned above. It is estimated that by building the ovens in slightly larger units—say with a capacity of two tons to the charge—that 625,000 cu. ft. of gas can be produced with the seven men.

The last plant I shall cover is a plant of horizontal retorts built in benches of eights. I choose benches of eights in preference to nines as they have proven more satisfactory in operation. These benches are built with retorts varying in length from 16 ft. up to and including 22 ft. It is a disputed question as to which length of retort is the best; some operators prefer the 16 ft. retort as a plant consisting of benches with this length retort is more flexible than a plant that is equipped with retorts that are longer. Another reason for their preference is the shorter length of travel for the gas over the incandescent coke reducing the chances of it breaking up and forming lampblack and pitch. I do not wish to imply that the 20 ft. or 22 ft. retort is undesirable, as such is not the case. Many operators prefer them as they have given most excellent satisfaction wherever used. They have one advantage that should not be overlooked, especially in these days of high costs of materials. If a plant is large enough to warrant an installation of 20 ft. eights the cost of construction per thousand cubic foot capacity is lower.

A plant of horizontal through eights is machine operated throughout. Complete equipment of coal and coke handling machinery is required as well as a power charging and discharging machine. Owing to the cost of this machinery and the minimum number of men required for operation, such a plant should not be built for send-outs less than 500,000 cu, ft, of gas daily. For a send-out of 500,000 cu. ft. of gas daily four benches of 16 ft. retorts are necessary; for the most economical operation full depth recuperation would be used to preheat the primary as well as the secondary air. Outside producers are probably the most desirable type of furnace, as the space under the retorts can be fully utilized for recuperation, and hot coke can be charged direct into the furnace for fuel. The coal for carbonizing would be handled from the cars through a hopper and conveyor to a crusher, thence with belt conveyor or bucket elevator to overhead coal bins which supply the retort charging machine. These coal bins can be located at one end of the retort house and the charging machine carries a hopper to supply it with coal for several charges.

A Preferred Arrangement

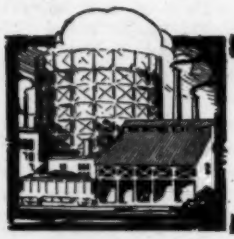
A preferred arrangement, however, consists of a continuous coal bunker extending the length of the benches, and fitted with Aldridge & Gibson patented doors, one for each tier of retorts. With this construction the charging machine automatically receives a single charge of coal from the bunker as it comes into position to charge a retort. As the coal is placed into the retort with this machine the coke is pushed out of the discharging end into a trough conveyor located directly in front of the benches. This conveyor takes the hot coke through a quenching hood and thence to a screening plant or storage pile.

You have probably wondered, when listening to the reading of this paper, why I have not included a description of vertical retorts. My reasons for omitting this type are several, one of which is that I do not feel qualified to describe a typical installation. The construction of verticals is very complicated, and the details of which, to prove interesting, should be covered in a paper of its own. Another reason for omitting this subject is that the tendency of bench building at this time is not leaning toward vertical construction. It is true that many vertical plants are in operation in the Northern and Eastern States, but the results they have shown have in no way outstripped the results being obtained from modern installations of gas ovens or horizontal machine operated through retorts.

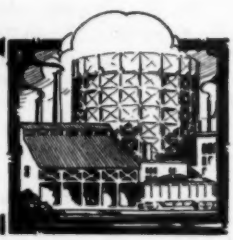
Before closing this paper I feel I should say something in favor of the Congdon Scrubber Standpipe System. This system, which is designed for the elimination of standpipe stoppages, is becoming more popular each day, and in fact finding its place as the gas man's friend. Many installations have been installed by the various construction companies, and each installation has proven its worth by removing from the retort house the heart-breaking work of cleaning standpipes.

As a brief description of this system I will describe an installation now in use at Macon, Georgia. The Macon benches were built new in the last two years, and the Congdon System as installed there contains features which are not necessary when the system is used on old benches. In lieu of one standpipe to each retort, the Congdon system provides only two standpipes to the bench, one to each vertical row of retorts. Each standpipe is connected to the hydraulic main with one bridge and dip pipes in the usual manner. A drain pipe is connected to the bottom of each standpipe extending down below the floor, where it is sealed in a collecting trough which in turn leads to the tar and liquor separator. Weak liquor is pumped from the weak liquor tank and forced through sprays located in the top of each standpipe. The sprayed liquor, coming in contact with the gas, cools it and removes from it a large part of the tar which is usually carried over into the hydraulic main. In addition to removing the tar from the gas, the liquor prevents it from sticking to the inside of the pipe, and carries it down into the collectting trough and thence into the separator.

I have given you a brief description of the more widely used types of plants, and in closing I would again urge you to give the most careful consideration to the particular conditions that effect your operation before deciding on any changes or additions to your carbonizing equipment.



NEWS OF THE GAS INDUSTRY



Franchise Tax on Gas Devices and Appliances Approved Inoperative in Connecticut

Governor Marcus H. Holcomb, of Connecticut, approved a bill making the franchise tax on water, gas, electric and power companies inoperative on the gross earnings derived by such companies from the sale of devices and appliances using their power.

Illinois' State Labor Leader Advocates Maintenance of High Wages for Utility Employees

Declaration by John H. Walker of the Illinois State Federation that organized labor will strenuously oppose wage reduction of employees of public utilities, has drawn considerable comment from Illinois employers in the public utilities. The Illinois Committee on Public Utility Information, which represents the gas and other utility interests of the State, emphasizes the importance of the stand labor is taking. Mr. Walker's statement that the higher wages labor had obtained during the war must be maintained is followed by this declaration: "I do not know whether the rates charged by the public utility companies are adequate to maintain the higher wage rate, but if they are found inadequate after investigation, then the rates should be increased sufficiently to guarantee the workers against wage reductions. Public utility organizations and other rate-regulating bodies should see that the workers are protected, both in their employment and in their wages."

ARKANSAS NATURAL GAS COMPANY will retire $38,350 general mortgage 6 per cent 20-year sinking fund gold coupon bonds dated May 1, 1916.

Fifteenth "Victory" Annual Convention of Southwestern Electrical & Gas Association Held at Galveston, Texas

Meeting Very Successful—Many Problems Widely Discussed, Particularly That of Rates

The fifteenth "Victory" annual convention of the Southwestern Electrical and Gas Association was held at Galveston, Tex., for three days beginning May 12 to 14. W. A. Sullivan, president of the association, having moved from the State of Texas to Shreveport, La., it devolved upon Burr Martin, the first vice-president, to fill the part of acting president at the meeting. A. Hardgrave, of Marshall, Tex., second vice-president, upon the request of Secretary H. S. Cooper, of Dallas, Tex., took the chair. The convention meeting was divided into three sections which held separate sessions, viz., the gas section; the light and power section; and the street and interurban railway section—followed by a general session.

The Mayor of Galveston, I. H. Kempner, opened the session and welcomed the convention to the city. In his address, Mr. Kempner referred to the voluntary step the city administration of Galveston had taken in raising public utility rates, notwithstanding that their franchise limited and fixed the amount, when the administration saw that the raise practically went to pay the increased cost of labor. Mr. Kempner said the administration felt it was but a small contribution that the people generally could stand. He also pointed out that the success of the community depended in large measure on the prosperity of its utilities—that the community could not prosper without it utilities sharing the benefits and he hoped that all who represented the utilities would strive to find a common ground upon which to work with the public; that when

Ohio Cities Gas Earns 19.73 Per Cent

The annual report of the Ohio Cities Gas Company, to be read to stockholders at their annual meeting in Columbus June 5, will show surplus earnings available for the common stock in the fiscal year ended March 31 last of $9,063,957, which is equivalent to 19.73 per cent on the $45,937,500 of outstanding stock.

In the 1918 fiscal year the company showed surplus earnings available for the common of $9,854,525, and 26.85 per cent on the $36,750,000 of common stock then outstanding.

Gross earnings for the 1919 fiscal year were $47,422,890. Operating expenses totaled $33,025,857, leaving net earnings of $14,397,033.

Gross earnings in the 1918 fiscal year were $39,929,134, operating expenses $25,141,258 and net earnings $14,787,876.

Net surplus income available for the common and preferred stocks in the 1919 year was $9,536,567, which contrasts with $10,328,491, the previous twelve-month period.

Lawrence, Mass., Improves Streets with Additional Gas Lamps

The Lawrence Gas Company has received orders from the city government to install a number of street lights in the various sections of the city as petitioned for at meetings of the council. Work of installing additional lights in the squares has been completed and the lights are a great improvement.

that is achieved he believed there would be no need for fear of the result either at the hands of the public service companies or the people. A. W. Houston, of Houston, Tex., responded to the Mayor's address of welcome and said that each member of the association was there confronted with questions vital to the interest of the public service business and that each came to try to surmount some of these questions and problems.

Burr Martin, acting president, then read his paper in which he dealt with the complex problems of peace the utilities are faced with and called attention to his belief that these problems are different and more difficult than any the public service companies have ever encountered; that they should be considered unitedly and that they should co-operatively unite in finding their solution and work diligently in the application of that solution in so far as it is adaptable to their respective properties. He believes if this plan is not followed conditions will become more chaotic, and their problems more complex. He said the financial status of the utilities is the most vital problem and that the primary necessity is a sufficient increase in rates to enable the utilities to earn a reasonable return, not only on the capital invested but so that the risk of business may be properly insured and also that all employees may be adequately rewarded; and further —to enable the utilities to form a reserve large enough and with sufficient elasticity of use to enable them to "iron out the peaks" in operating expenses without the necessity of frequent demands for changes in rates, or without having to constantly lessen their legitimate profit or lower their standard of service. He also said no full sucess for any public utility can be obtained where the controlling heads of that property do not keep constantly in touch with the pulse of the public as a whole and adapt the policy and practice of the company to the changes in that pulse.

Chairman Burr Martin then addressed the assembly and brought up the subject of publicity. He said that it is the general impression throughout the country of the public service operators that the public must become acquainted with the underlying principles of great need to turn the "spotlights" on the public service business—and until this was done many of their problems would remain unsolved.

The next number on the program was a novel one, somewhat unusual for an association meeting. Secretary Cooper announced that owing to his failure in securing Judge Edward Harris, of Galveston, who had addressed the convention a year ago, he had substituted Mrs. H. L. Garrett, of the Women's Suffrage Society, who would give a short address. Mrs. Garrett thanked Secretary Cooper for affording her this opportunity. In addressing the meeting Mrs. Garrett said the women of the State were asking for the full suffrage because every woman as housewife and mother, in the most important institution of all our civilization—the home—is entitled to representation in the government; that in these days the health, moral upbuilding and growth of her children depends very largely on politics and so every housewife is vitally interested in politics, because politics largely govern the whole thing and therefore women rightfully feel they have exactly the same interests in the government that men have.

Secretary Cooper then asked the rising vote of thanks. The request was heartily complied with.

Secretary Cooper made his report on the affairs of the association. He spoke of means of gaining new members and urged the fact that each one individually could do more to increase the membership of his association than can the association office—that the spoken word of a utility man is worth one hundred times more as an incentive to membership than all the literature which the secretary can send out to those who are not members.

At the first general session, A. Hardgrave, chairman of the general convention committee, gave an address on "The Value of the Association to the Utilities of the State." He defined the object of the association—to foster, promote and protect the common interests of its members; to advance scientific and practical knowledge in all matters relating to public service, and the rendering of free assistance and advice to members as may not be inconsistent with its purposes. He said that the value of associations and association work was recognized today by business of every class; and he further defined the association as the one means of co-ordinating or binding together businesses of like class for the economic development and protection of those specific classes of business. He outlined three principal advantages of the association to the utilities: Development, Protection, Financial. Under development he discussed as a highly important and scientific phase of the business —rates. He put forth the opinion that while the larger companies have developed to a certain extent fairly good systems of rate making, the smaller plants have virtually ignored or neglected this important question and he believes it is the one question which has not received the careful attention of the operators and that greater progress could be made if the company members of the association will take advantage of the machinery provided by the associations. Mr. Hardgrave said the public service business is comparatively young, but has enjoyed a most remarkable development, both scientifically and in volume, and that he believes many have failed to realize the extent to which the association work has aided in that development, and the bringing of the public utility industry up to its present state of efficiency; that the exchange of thoughts and ideas at the annual conventions and committee meetings have been the seed from which has grown this mighty industry.

On Tuesday evening, May 13, the convention held a banquet for the first time in six or eight years. The banquet committee took a great deal of pains and made it a great success.

Secretary Cooper introduced another novelty into the sessions and the banquet—a "sing-song." E. Shumway, a song-leader, and head of the War Camp Community Service, lead the group in short but very popular "sing-songs." It made a great hit and everyone appeared to be proud of his voice.

E. F. McKay, rate expert of the Empire Gas & Fuel Company, of Bartlesville, Oka, gave an address. His subject was "Principles of Rate-Making for Electric and Gas Utilities and Their Practical

(Continued on page 500.)

Supreme Court at Seattle, Wash., Upholds Commission in Rate Increase

The Seattle Lighting Company, in September, 1917, filed with the public service commission a tariff substantially increasing the rates for gas in the city. Following the filing of the company's tariff the city of Seattle entered a protest against the proposed increase, alleging that the rates in the schedule were unfair, unreasonable and discriminatory.

After a hearing the commission established a tariff differing in some respects from that filed by the lighting company, in some instances raising the rates and in other instances lowering them. Contending that the commission was without authority to raise the rates above those provided in the tariff asked for by the company, the city of Seattle sued out a writ of review in the superior court of Thurston County. The right of the public service commission to put into effect a schedule of rates, in some instances exceeding those contained in a tariff filed by a public utility company, if the commission is satisfied that such increases are necessary to enable the utility company to continue to serve the public, is upheld by the supreme court in affirming the case of the city of Seattle against the public service commission of Washington. By the decision the city of Seattle loses its fight against the increase in gas rates established by the Seattle Lighting Company.

Individual Gas Plants; Home Manufactured

In some parts of Holland on the drained marshy land below the sea level natural gas is plentiful and many farmers have put up their own gas plants and put it to practical use. The installation comprises a well, into which water from the soil filters, with a gas generator therein. This gas generator extracts the gaseous properties from the water and conducts them to a reservoir containing a supply for the house. The gas thus obtained provides all the wants for cooking, heating and lighting in the house or any part of the farm. After the plant is once installed, which can be done at a small expense, the cost is nothing, and the quality of the gas is said to be particularly good.

Waukegan Company Wants Further Rate Increase

The North Shore Gas Company of Waukegan, Ill., which was granted permission to extend its rate as a war-time necessity, is seeking a further increase and has filed its report with the State utilities commission to that end. The old gas rate was $1.10 per 1,000 cu. ft. The gas company made an appeal to the utilities commission, pointing out that expenses had increased because of the war and that it was a positive necessity to have the rate increased. The commission granted an increase to $1.30 per 1,000, which rate was to have reverted back to the former rate on the first of the year, but because war conditions were unchanged the commission granted an extension to July 1 of this year.

New Ruling by City of Brockton, Mass.

The City of Brockton, Mass., has recently made the following new ruling in regard to the laying of gas mains: No application for the location or relocation of gas mains in any street or way shall be granted until the applicant therefor shall first file with and have approved by the City Engineer a plan and profile showing the street or way in which said main is proposed to be constructed, the particular portion of said street or way in which said main is to be laid, together with the length, size and kind of pipe to be used, and the depth below the established grade of said street or way where the same is to be placed. The granting of such location upon compliance with the above provisions shall not be construed to dispense with any other provisions of the ordinances relative to the digging up or opening of streets and ways.

Petition in Bankruptcy Personal; Does Not Affect Company

A voluntary petition in bankruptcy has been filed in the United States District Court at St. Louis by Joseph G. Beckman, president of the Universal Heater Manufacturing Company. This action is said in no way to affect the gas water heater company, the proceedings being a personal matter.

Mr. Beckman lists liabilities of $22,000 and assets of $213. Among the debts enumerated in the schedule is a note to O. L. Garrison for $5,000 secured by 200 shares of stock in the water heater company which, the petition says, have no market value.

Northern Indiana Gas & Electric Company's State Tax Return Figured at $6,000,000

Company Petitions New Bond Issue

The Northern Indiana Gas & Electric Company will file a petition for a new bond issue. The company's representative, W. A. McInerny, of South Bend, Ind., stated before the State board of tax commissioners that it had borrowed about $900,000 for war-time improvements, and had to pay 8 per cent for the money, while the company is permitted a return by the public service commission of only 6 per cent.

He said the company's property at South Bend is paying taxes this year on a valuation of about $455,000. Multiplied by three, he said, the possible valuation for this year would be about $1,300,000. The State tax board asked that a statement be provided showing the valuation on which taxes are paid this year in each city and town in Indiana where the company operates utilities. The company owns public utilities in several Indiana cities, and was assessed last year at about $2,000,000; its return for this year shows a valuation of about $6,000,000. The gross revenue of the company for 1918, Mr. McInerny said, was $3,912,000 and, after paying operating expenses, $1,100,000 remained. But in 1918, owing to war conditions, he said, neither a depreciation reserve nor an accident reserve was set aside, and owing to scarcity of labor, high prices and scarcity of money the usual expenditure for maintenance was not made. If the reserves had been set aside the usual repairs made, he said the amount would have been $487,140. Deducting this from the income left after subtracting operating expenses from gross revenue, he said, $615,580 would have been left. Capitalized on a 10 per cent basis he showed the result would be about $6,000,000.

Massachussets Gas Company Enters Oil Business

The trustees of the Massachusetts Gas Companies have decided to enter the oil business and have incorporated the Beacon Oil Company with a capital of $2,500,000, which will shortly build a refinery on land in Everett that is now owned by the Massachusetts Gas Companies interests. The plans for the refinery contemplate a capacity of 10,000 barrels a day. Construction will begin as soon as the necessary permits are obtained. The company was organized originally as a holding company for taking over the securities of gas companies serving the metropolitan district, but has in recent years branched out into many diversified industrial lines, including coal, shipping and explosives. The Massachusetts Gas Companies will have stock control of the new company.

United States District Court Declares Cincinnati Referendum Against 35-Cent Rate Valid

The city of Cincinnati appealed to the United States District Court that the temporary injunction given the Union Gas & Electric and the Cincinnati Gas & Electric Companies against the city, last June, restraining the city from interfering with the 35-cent gas rate until the dispute is finally settled, be dissolved, and that the relief prayed for by the companies be denied and dismissed. At the time the injunction was granted the gas companies put up $250,000 surety that in the event the 35-cent gas was defeated, it would refund to all customers the excess charged over the 30-cent basis. The company claimed that the referendum election which rejected 35-cent gas had no authority, there being no law authorizing a referendum on the legislative action of the City Council. The United States District Court has passed this point in favor of the city and decreed the 35-cent gas rate ordinance of the city of Cincinnati was invalidated by the municipal referendum which voted it down. The city contended that the 35-cent rate ordinance never became a contract between the city and the company, since it failed to receive the indorsement of the people by referendum.

The companies contend that the 30-cent rate ordinance, passed by the City Council, is confiscatory and contrary to the fourteenth amendment to the Constitution of the United States because it tended to impair the obligations of the contract. All this leads up to the contention by the city that the referendum, being a part of the legislative machinery of the city, is not an impairment of the "obligations of a contract" within the meaning of Section 10, Article 1 of the Constitution of the United States, However, the question of whether or not the 30-cent rate established by the new ordinance is confiscatory is still to be heard.

President Announces Company Plans Representation of Employees on Board of Directors

Employees of the St. Louis County Gas Company soon will be represented on the Board of Directors of the company, it is announced by W. D. Alderson, president of the Employees' Mutual Benefit Association of the company. A meeting of the stockholders of the company has been called for the near future and it is probable the employees' representative will be chosen at that time.

Residents of Sedan, Kan., Seize Opportunity for Acquiring Stock of Local Company

A home company owned by home people being the end in view, the announcement that a large block of stock in the Sedan Gas Company of Sedan, Kansas, is for sale by outsiders aroused great interest in the city's residents and there is little doubt that the deal will be put through quickly. A wide distribution of the stock is desired in order to broaden the local interest in the home company, and while the present stockholders are nearly all intending to increase their interest by taking up a portion of the shares offered, they will limit their purchases to that remaining after a reasonable demand by those not now members of the company are filled. It requires no keen discernment to realize the desirability of having the stock of a company held entirely by local citizens from a standpoint of local welfare and general interest in the service, as well as to retain the company earnings in the home field.

Decline of Natural Gas Supply

Chief Problem Discussed at Fourteenth Annual Convention of Natural Gas Association

The exhaustion of the natural gas fields all over the United States was the problem which confronted the fourteenth annual meeting of the Natural Gas Association of America, which met at Cleveland, Ohio, May 20-22. F. M. Lege, Jr., president of the Lone Star Gas Company, said:

"There is grave concern all over the country because of the rapidity with which the natural gas fields are being exhausted. When the fields become barren all heavy investments made in natural gas will be worthless. I do not know just what plans are being made to meet the situation. I believe the efforts to discover new fields will be redoubled.

"In Texas the new fields discovered in the western part of the State will help considerably. For the most part, however, the fields are becoming very scattered throughout the State."

Another problem, according to Mr. Lege, will be the building of pipe lines with the present high cost of steel.

"While steel is three times as expensive as it was before the war, it would still be possible to build pipe lines if there were any assurance that the price of steel would remain steady," he said. It would be a tremendous investment to build a pipe line. Should the line be completed and steel take a drop we would lose a certain amount of our investment. We would have to charge high prices to our consumers in order to meet the expenses of operation and interest.

Old Gas Well Abandoned 35-Years Comes to Life

An oil well on a farm in White Bluff, Tenn., which has been abandoned for thirty-five years, began again just a few days ago to send forth oil and gas. The well was drilled to a depth of 2,000 feet thirty-five years ago by a Nashville company. When first drilled it produced oil and gas, but later failed, and was abandoned and plugged, but oil and gas are now forcing their way through the surface.

Brooklyn Borough Gas Company Loses Rate Case Appeal

The Brooklyn Appellate Division affirmed without opinion a decision of Supreme Court Justice Cropsey, declining to interfere with an injunction granted last summer by Justice Benedict of the Supreme Court, which restrained the Brooklyn Borough Gas Company from charging more than 95 cents per 1,000 ft. to consumers. In his decision, Justice Cropsey said he felt compelled to abstain from amending the decision of another Judge having co-ordinate jurisdiction. The company appealed from the decision, which was opposed by the Public Service Commission and the city. It was contended that if the company was dissatisfied, it should have appealed from Justice Benedict's decision directly.

Gas Well Struck by Lightning Causes Spectacular Fire

A large gas well at Desdemona, near Dallas, Texas, was fired by lightning and the rig burned down. This well, at the time it caught fire, was making 20,000,000 cu. ft. of gas and about seventy barrels of oil. The fire was spectacular, owing to the large volume of gas that burned and the company had great difficulty in controlling and in getting the fire extinguished promptly.

The storm did considerable damage in the Desdemona field, but it will be promptly repaired and the work of development that has recently taken on new impulse will proceed without material interruption.

Laclede Gas Light Company Asks 20 Per-Cent Increase

Company's Counsel Shows Operating Costs Averaged on a Ten-Year Period, Not Averaged Only on Abnormal Period

The Laclede Gas Light Company of St. Louis, had filed with the Missouri Public Service Commission an inventory of its property in support of its application to increase gas rates in St. Louis approximately 20 per cent. The inventory sets out the total reproduction value to be $38,009,000 ,and the "reproduction less depreciation" value $36,472,400.

The commission granted City Counselor Daues, who is opposing the increase, two weeks in which to study the valuation and present evidence in opposition to it. The company's next hearing in the case has been set for June 5, at Jefferson City, Mo.

On the valuation fixed by the company, the net earnings on the basis of last year's business were 4.89 per cent on the reproduction less depreciation valuation. This would be figuring the net earnings as the amount applicable to the payment of interest and dividends.

The increase asked by the company is 15 cents per 1,000 cu. ft., which would increase the company's revenues approximately $800,000 a year. The valuation of the company's property as filed follows:

Station A—Coal gas, reproduction cost, $1,730,000; depreciation at 5 per cent, $1,643,000.

Station A—Water gas, reproduction, $2,270,000; depreciation at 7 per cent, $2,111,000.

Station B—Coal gas, reproduction, $750,000, depreciation at 5 per cent, $712,000.

Station B—Water gas, reproduction, $1,220,000; depreciation at 7 per cent, $1,135,000.

Coke Station—Reproduction, $1,850,000; no depreciation value.

Holders—Reproduction, $1,900,000; depreciation at 4 per cent, $1,824,000.

Gas Boosters — Reproduction, $200,000; depreciation at 5 per cent, $190,000.

Distribution System — Street lamps, reproduction, $500,000; depreciation at 4 per cent, $475,000. Mains, reproduction, $7,040,100. No depreciation value shown. Services, reproduction, -$2,619,000; depreciation at 15 per cent, $2,226,200. Manholes, reproduction, $56,000; no depreciation value shown. Meters, reproductions, $2,351,000; depreciation at 10 per cent, $1,999,100. Shops, reproduction, $350,000, depreciation at 10 per cent, $315,00. Office buildings, reproduction, $900,000; depreciation at 5 per cent, $855,000. Pintsch construction, reproduction, $180,000; depreciation at 15 per cent, $153,000. Electric generating plant, reproduction, $800,000; depreciation at 3 per cent, $776,000. Electric distribution, reproduction. $1,800,000; depreciation at 10 per cent, $1,620,000. Land, $1,796,800. Total reproduction cost, $28,313,800. Total reproduction less depreciation, $26,777,200. Organization and supervision—Expenses, $4,245,200. Interest during construction, $1,700,000. Working capital, $550,000. Stores, $1,200,000. Intangible values, $2,000,000.

In presenting the valuation, Isaac H. Lionberger, counsel for the Laclede Gas Light Company, said the firm had suffered an actual loss in net revenue of more than $1,000,000 in the period of time that the application for an increased rate schedule had been under consideration by the commission. He said that in fixing what the company considered a fair valuation of its property, franchise values: promotion values, and losses had not been taken into account. The valuation, he said, was based solely upon an inventory of plants, appliances, distributing systems and real estate owned by the company. In figuring the cost of operating the plants, he said, the average cost during the last ten years, and not only the present cost, had been taken into consideration.

C. L. Holman, president of the Laclede Gas Light Company said that the estimated valuation covered only the big items of the company's assets and was merely a rough estimate.

New Haven Company Adopts "Continuous Meter Reading System"

For many years the New Haven Gas Light Company has read the majority of its meters during the latter part of the month. All bills have been sent out at the end of each month and the discount period for all bills has expired on the tenth of the following month.

As the number of meters has increased, it has become more difficult to serve customers promptly during the discount period, especially on the last two or three days.

Therefore it has been decided to adopt the plan in use in many of the larger companies known as the Continuous Meter Reading System, the change becoming effective this month.

Under the new system approximately the same number of meters will be read each day throughout the month. Bills will date from the day the meter is read and will be delivered within five days thereafter.

The discount period will expire 15 days from the date the meter is read instead of on the tenth of each month as heretofore, and the last discount date will be stamped conspicuously on each bill.

These Men Made the Tests to Determine a Fair Heat Value Standard for Indiana

TOP ROW—LEFT TO RIGHT

S. WEAVER SMITH, Supt. of Appliances, Citizens Gas Co., Indianapolis, Ind.
D. W. HUFFERD, Staff Engineer, Indiana Public Service Commission
C. O. BOND, Chief Physicist, United Gas Imp. Co., Philadelphia, Pa.
FRANK TOWNSEND, Superintendent, Huntington L. & F. Co., Huntington, Ind.
A. I. PHILLIPS, Associate Gas Engineer, Bureau of Standards, Washington, D. C.
FRANK J. HISS, Assistant Engineer, No. Indiana G. & E. Co., Lafayette, Ind.

BOTTOM ROW—LEFT TO RIGHT

J. T. HALLETT, Staff Engineer, Indiana Public Service Commission
F. W. BOETEL, Staff Engineer, Indiana Public Service Commission
M. J. FRANKEL, Assistant Gas Engineer, Bureau of Standards, Washington, D. C.
M. F. SCOTT, Staff Engineer, Indiana Public Service Commission

All were on the staff of the Indiana Gas Calorific Value Committee when making tests at Huntington, Ind., and other Indiana cities to determine a fair heat value standard for the State.

New Orleans Gas Light Company Increases Its Capacity

A new unit will be added to the gas manufacturing plant of the New Orleans Gas Light Company within ninety days, which will increase the daily capacity from 7,500,000 to 11,000,000 cu. ft. The new unit is designed to take care of the heavy demands made upon the company during the winter seasons. The average daily consumption at this season of the year is approximately 4,500,000 cu. ft., but in midwinter it has gone as high as 9,000,000 cu. ft. The first carload of pipe for a new high pressure gas main into the down-town section of the city has arrived, and construction of this line soon will begin. Complaint has come during the past year from residents of that section of insufficient gas and a lack of pressure. The new line, will amply care for the demand.

Committee Appointed to Recommend Standard for Gas Service

A committee composed of representatives of the Public Service Commission of Indiana, the Indiana Gas Association and the Indiana Municipal League have been making an inspection of all gas plants and properties in the State of Indiana, for the purpose of compiling a report for the commission upon which the commission will recommend a standard number of thermal units of heat in gas to be supplied by the various gas companies in the State. It is expected that the Public Service Commission will adopt the recommendation of the committee as the standard for gas service.

U. S. Government Will Erect Gas Plant

According to information received at St. Louis the War Department has decided to convert Camp Humphries into a permanent military training institution on the order of West Point and in that connection will construct a gas plant and distribution system to serve a community of 10,000 persons.

Lieut. George A. Caine formerly of the industrial gas department of the Laclede Gas Light Company of St. Louis, has been selected by the War Department to supervise the construction of this plant. Lieut. Caine was making preparations for returning to the commercial gas industry on the expectation of an early discharge when this task was assigned to him. It is expected that he will now remain in the service at least another year.

Fifteenth "Victory" Annual Convention of Southwestern Electrical & Gas Association Held at Galveston, Texas

(*Continued from page* 495.)

Application." He dealt with the subject as to what rates are, rather than with the theory of rate making, and the rate as applied to the utility business. He called it a "review" of the past year, which was an extremely important year in rate-making and in rate-application. Mr. McKay said that no field in our country presents a greater opportunity for fair-dealing or puts greater responsibilities upon sound minded citizens, than that of public utility ownership, operation and regulation; and that the problem of rates presents the most vital subject in that field for it involves inextricably all other questions connected with such ownership, operation or regulation. He told how the alleviation of distress due to sufficient rates has not been confined to any one locality or section but extended from coast to coast; that it was possible to describe the trend of rate-making in this country during the past year in a single word: "Upward." He outlined a number of particular cases describing methods and actions taken and summed it up that where rate advances have been refused it usually has been because of reasons academic in character. He spoke at length on the natural gas situation and said that the future holds but two alternatives for that industry—relief or ruin; that there is but one possible relief—a higher rate and that he believed the day near at hand when rates for natural gas must be advanced, not only a few cents, but to a point as high as they can go in competition with other fuels. He spoke of the attitude of the state commissions and said that the conviction in utility and financial circles, local and generally, is that the commissions are endeavoring in an increasing degree to be fair to the public as well as to the utilities and that they are as fully aware as anyone that unless a utility can keep its head above the water mark part of the time it will drown and the interest of the public as well as the life of the utility be extinguished. Mr. McKay summed up the situation of the rate problem as being a most urgent claimant for painstaking and patriotic consideration.

Milton H. Wagner, of the Bureau of Standards, gave an address on "Standardization, Its Practical Application in the Public Utility Business."

Secretary Cooper then put before the convention a prize questionnaire. The question was, "What is the most urgent present need of the public utilities of Texas, and how can it be best and most quickly fulfilled?" Each member was asked to give not over two hundred and fifty words on the subject. Each section passed on the answer to the questionnaire written by a man in that particular section. There were first, second and third prizes offered for the three best answers. These prizes were awarded by the general session. The three answers selected by the committee were read and the prizes were awarded as follows:

First Prize—G. H. Cuchman, superintendent electrical department, San Antonio Public Service Company.

Second Prize—W. P. Tuttle, San Antonio Public Service Company.

Third Prize—J. K. Chesborough, engineer, Brush Electric Company, of Galveston.

Dr. E. P. Schoch, head of the department of chemistry of the University of Texas, made a very technical address on "Texas Lignite," going into the subject thoroughly both from a chemical and commercial standpoint. This is considered a very important subject in the State of Texas because of the lack of good commercial coal, but there is said to be a sufficient quantity of cheap fuel in the form of lignite to last for many generations.

At the second gas session F. L. Weisser, of the San Antonio Public Service Company, addressed the convention on "Economy in Gas Plant Operation." Mr. Weisser said it was his object to point out some of the conditions which should be given special consideration with a view to obtaining maximum efficiency in water gas manufacture. He told how uniform and good results depend not only upon the application of the proper operating methods, but also to a great extent upon a uniform equality of the raw material.

H. E. Danner, commercial manager of the Houston Gas & Fuel Company, spoke on "Teaching the Consumer Economy in the Use of Gas." He said that gas companies have practically led the way in cooperating with their public and that good service is the keynote throughout the industry. He also said that he believed personal contact is the best method of teaching the consumer economy. He suggested methods of bringing the idea of economy to the attention of customers—by printing on the face of bills, and inserting in the newspapers notices such as "Our Service Department Is at Your Command. Tell us promptly if there is any trouble with your gas appliances. Your request will start *quick service* in operation at once. All adjustments will be made free of charge, etc." He brought out the point that teaching consumers economy does not necessarily mean that a reduction in the use of gas will be experienced, as the best satisfied consumers will always find additional needs for its use.

This was the end of the special sessions and the business session was then held at which time the various reports of the auditor and treasurer, etc., were read; also the report of the nominating committee. The new officers elected by the nominating committee for the coming year are; President, Burr Martin; first vice-president, A. Hardgrave; second vice-president, C. E. Corder; third vice-president, Albert H. Warren; secretary, H. S. Cooper; treasurer, J. B. Walker.

Burr Martin, the new president, made a little speech in which he said he felt that all should make an individual effort to bring into the association's membership every utility in the State of Texas.

The meeting was then adjourned. It was considered a most successful one.

Another Big Gasser Brought In

The Gladys Bell Company, drilling about four miles southeast of Santa Anna, Texas, brought in a big gasser at a depth of 1,492 feet. The well is estimated to be making 25,000,000 cu. ft. daily, and so great was the gas pressure that the six-inch bit and tools twice were hoisted over the derrick.

New York Companies Benefited by Decrease in Price of Oil

Price Reductions of Other Commodities Looked For

The reduction of 1½ cents a gallon in the price of water gas oil (new price 6 cents a gallon), effective from April 1 to Dec. 31 of this year, means a saving of $1,530,000 for Consolidated Gas and about $900,000 for Brooklyn Union in the nine months' period. While the reduction in oil prices is important, oil being the largest item of expense in the manufacture of gas, the big point is that a lowering in the cost of other materials may be looked for.

Thus far there has been no decrease in the price of coal, which is second in importance of the materials used in making gas. However, contracts covering the full year's requirements have not yet been closed, and as both companies are large consumers they will benefit by lower prices if any should occur. In many other materials of less importance there has been a lowering from war-time prices.

Benzol for Motor Oil Big By-product of Gas Company

George C. Lowell, chief construction engineer for the Peoples Gas Light & Coke Company, in the company's rate hearing before the Public Utilities Commission, stated that the company is extracting 2,601,703 gallons of benzol a year and is furnishing the oil to consumers ready for use without further treating. Mr. Lowell estimated that the company will sell the oil at 16½ cents wholesale, 4 cents less than the Standard Oil Company charges in carload lots, and will retail it at 23 cents, the same price as gasoline.

BROOKLYN UNION GAS COMPANY'S employees held the monthly meeting of their Progress Club in the auditorium of the company's gas demonstration building. They presented a one-act musical satire, entitled "You Said It." A cast of ten was employed in dispensing the seven syncopated tunes which, combined with witty references to many of the leading members during the action of the piece, kept the audience laughing and applauding for the forty-five minutes it took to give. The auditorium was crowded to the doors.

Southern Counties Gas Company Expects Busiest Summer in Its History

The Southern Counties Gas Company in completing the system of gas mains to Harbor City, Cal., has made arrangements for the laying of nearly six miles of gas mains to supply Harbor City residents with natural gas. Pipe for the installation of the mains in Terminal Island is expected to arrive soon. Manager O. R. C. Grow, of the gas company announced this morning that the coming summer would be one of the busiest in the history of the concern.

West Virginia and Ohio in Controversy

The United States supreme court grants to Ohio and Pennsylvania permission to institute proceedings against West Virginia to contest the validity of state legislation restricting the transportation of natural gas into adjoining states. West Virginia, it will be remembered, tries to monopolize its own gas supply, declaring it illegal to pipe it out of the state until West Virginia's own needs are filled.

Ohio challenges her neighbor's right to take such a position and maintain it. Thousands of people in this state depend on West Virginia gas for lights and fuel, and to cut off the supply as proposed would entail large financial losses and no little suffering. It would seem as sensible for a coal producing state to prohibit the sending of coal over the border until its own needs were fully satisfied.

The case will now go to the courts to be determined on its merits, unless West Virginia recedes from a position which to Ohio looks untenable.

D. G. Fisher, Engineer, Takes Over Iowa Southern Utilities Company

D. G. Fisher, formerly engineer for the Peoria Gas & Electric Company, and now engineer for the Central Illinois Light Company, has taken over the Iowa Southern Utilities Company with its 200 miles of transmission lines. The deal involves $2,500,000 and is the largest consummated in that part of the state for some time. Mr. Fisher becomes president of the company and will give it his personal attention.

Municipal Gas Company Reduces Recently Increased Price 15 Cents

Reduction in Price of Oil Permits the Decrease

The Municipal Gas Company, of Albany, N. Y., has given out new rate schedules making a reduction of 15 cents in the recently increased price of gas. The reduced rates will go into effect on June 20.

Carl H. Graf, vice-president and general manager of the company, in an announcement said that a reduction in the price of gas oil to the company would permit the decrease.

The new rate for domestic consumers will be $1.15 per 1,000 cu. ft., as against the $1.30 price now being demanded by the company, under an order of Justice Gilbert D. B. Hasbrouck, of Kingston, which is now being contested in the courts. The $1.15 price will be effective for the first 25,000 ft. of gas consumed. The new rates fix $1.05 as the price of gas consumed in excess of 25,000 cu. ft. The old rates which are to be superseded fixed $1.20 as the price of the second 25,000 cu. ft. of gas consumed and $1.05 for the excess over 50,000 cu. ft. Emphasizing the intention of officials of the Municipal Gas Company to give Albany consumers the benefit of every saving it can make in the cost of operation, Mr. Graf said that the company wants to get back to the old dollar rate eventually, if conditions return permitting them to do so.

Syracuse Not Granted Permission

Governor Smith of New York has vetoed the special law enlarging and strengthening the powers of the Syracuse Bureau of Gas and Electricity. The memorandum accompanying the veto is exceedingly brief, and its contention, in substance, is that the bill is objectionable because it would mean an infringement upon the powers of the public service commission. The Syracuse proposal was this: That its local bureau, maintained at its own expense, should be authorized, by an increase of its powers, to co-operate with the public service commission in remedying the grievances of individual consumers.

THE TWIN CITY OIL & GAS COMPANY brought in a gas well at 1,470 ft. in Tulsa County, Oklahoma, which is doing 15,000,000 ft.

Chicago Business Men Oppose Control of Public Utilities by Municipal Elections

Opposition by the big business men of Chicago and Illinois is making itself felt against the home rule bill for public utilities. Criticism of the proposed method of controlling public service by municipal elections was made in a statement by Harry Eugene Kelly, official representative of the Chicago Association of Commerce. Mr. Kelly declared that the passage of the home rule bill now before the State legislature would force many gas companies to close, and would leave many communities without gas, electric or other utility service. The disruption of the public service of the whole State would result, in the opinion of Mr. Kelly. "The situation may be illustrated," he said, "by the gas service rendered by one company, which makes the gas at one place and distributes it among widely separated towns. The proposed bill allows each of these towns to regulate the price and quality supplied from one plant and a single pipe line, and this makes it impossible to deliver gas to any of them. Small towns cannot maintain individual plants. They depend upon collective use of a single plant. The same situation exists in other utilities. A telephone or street car line cannot be run efficiently under the conflicting rate and service regulations of all the towns supplied by it. "Matters affecting public utilities are subject to intricate, specialized knowledge," continued Mr. Kelly. "The Public Utilities Commission supplies this service impartially for the benefit of all the people. Members of the city councils are not elected because of specialized qualifications. As we all know, they do not claim to possess the expert knowledge and experienec required to determine rates and many matters of service in public utility administration. The proposed bill would abandon all State regulatory service, and substitute nothing in place of it."

THE NATIONAL FUEL & GAS COMPANY'S total earnings for the year ended Dec. 31, 1918, were $9,086,-268, or $481,456 larger than those for the preceding year. Expenses and taxes amounted to $3,781,343, an increase of $897,795. Net earnings were $3,945,614, a decline of $500,881.

Personal Notes

C. E. Drayer, secretary of the American Association of Engineers, has reported the development of a large chapter of the association in the Twin Cities. The society, which was originally the St. Paul chapter, with twenty-one charter members in September, 1917, now is the Twin City chapter, with three hundred members. Meetings are held alternately in Minneapolis and St. Paul. Recent officers elected for the Twin City chapter are:

President, F. K. Bennett, princip l assistant engineer, M. & St. L. R. R.; first vice-president, W. B. Irwin, office engineer, Eastern District Northern R. R., St. Paul; second vice-president, A. V. Duncanson, cost engineer, City of Minneapolis; secretary, A. C. Smith, assistant engineer M. & St. L. R. R., Minneapolis; treasurer, E. W. Polmgren, assistant engineer C. M. & St. P. R. R., Minneapolis; assistants to secretary, Hardy Bryan and Arthur L. Rosenthal.

R. B. STITZER, general superintendent of the Spokane Gas & Fuel Company, Spokane, Washington, has been transferred to Toledo, Ohio, on special work for H. L. Doherty & Co.

BERT C. OLIPHANT, of Buffalo, was chosen president of the Natural Gas Association of America at the closing session of the annual convention.

E. V. GMEINER has been transferred from the Pueblo Gas & Fuel Company, Pueblo, Colorado, to the Spokane Gas & Fuel Company, Spokane, to succeed R. B. Stitzer.

DANIEL LEVIN, for the past three years manager of the sales department of the local division of the Rockville-Willimantic Gas & Electric Light Company, Willimantic, Conn., resigned his position to go in business for himself in New York City, having leased a store at 575 Tremont Avenue, Bronx, which will be known as the Nonpariel Gas & Electric Fixtures Company. He was presented with a handsome open-faced gold watch by his associates in the local office of the company.

Construction Notes

Gas Light Company to Build New Storage House

The Springfield Gas Light Company, of Springfield, Mass., has bought about four acres of land with a frontage on the tracks of the Athol division of the Boston and Albany railroad The disposition of this new land has not yet been determined by officials of the company, but it is probable that it will be utilized to build a storage house for fittings and such things for the demand in the vicinity. It is also probable that additional use may be determined later on for the tract. The plant of the company will not be transferred to the new location. In the business of the gas company it is often inconvenient to supply demands for fittings and other accessories in outlying districts from the Springfield office, and the proposed storage house would take care of calls of this nature.

New Scrubber Building at Worcester, Mass.

The Worcester Gas Light Company, of Worcester, Mass., will build a brick scrubbing room at a cost of $1,000. This addition will be one story high and 35 ft. by 16 ft.

Porterville, Cal., Plans Erection of Gas Plant

By a unanimous vote of the city council of Porterville, Cal., a resolution of intention has passed to bond the city for $200,000 for the construction of a municipal gas plant, July 1, 1919, having been set as the date for the special bond election.

Decision to call the bond election as soon as legally possible was reached after F. W. Pease, city engineer, reported that he had canvassed the plans, specifications and estimates of cost furnished for the proposed plant by J. M. Berkley of Los Angeles, chief engineer, and found them conservative.

One of the first steps in connection with the proposed city plant will be a survey of the plant of the privately owned Central California Gas Companies, and on this survey will be based an offer to be made for the corporation's physical property.

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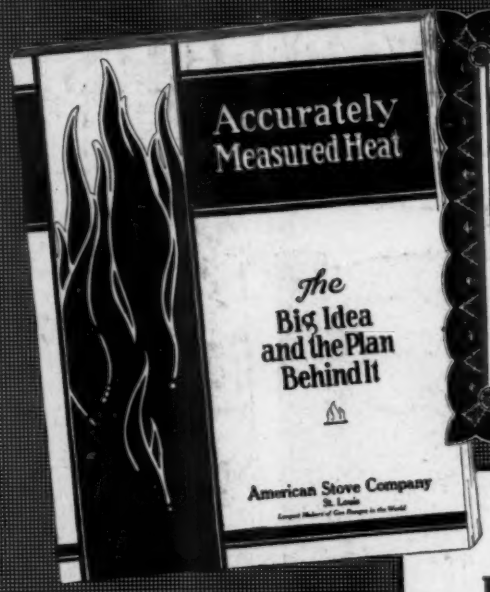

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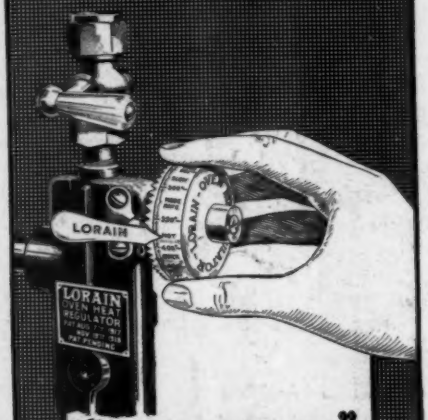

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